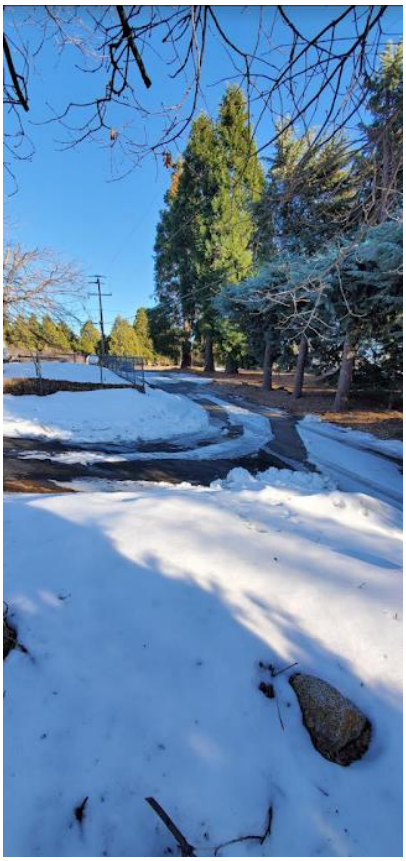
2020

Summaries were written by Miguel Miller, editor of the NWS San Diego's quarterly newsletter *Coast to Cactus Weather Examiner*.

January

The first week of January fell mostly under the influence of high pressure with fair and dry weather.



A couple inches of snow fell at Palomar Mountain on 9 January. Photo Kent Miller.

A trough of low pressure quickly gave the region a glancing blow and very light precipitation on the 9th.

Dry northwest flow prevailed for several days before the next trough hit the region on the 17th with light precipitation and gusty westerly winds in the mountains and deserts. Some mountain locations received 0.50 to 0.78 inches of precipitation, but all lower elevations received less than 0.50 inch. Up to 3 inches of snow was recorded in the higher mountains.

High pressure followed with fair and warm weather through the 20th. A moist, but weak trough of low pressure brought another round of light precipitation on the 21st, focused mostly on the coast. Highest amounts, up to one-half inch, were observed around northwest San Diego County. Everywhere else measured below one-third inch.

Warm weather followed through the 26th before a very weak system brought very little if any precipitation on the 27th.

Offshore flow developed on the 29th and 30th with strong northerly winds that were quite widespread through the 31st. Some foothill locations had gusts achieving 60 to 80 mph.

Precipitation fell well below average for the month, from 5 to 25% of average. Seasonal precipitation to date (since 1 October) ran from 70 to 180 percent of average.

Average temperatures ranged from near normal to 3 degrees above average.

February

Strong high pressure over California on the 1st brought record high temperatures to the region. It quickly gave way to a fast-moving trough of low pressure cooling down the region on the 3rd and 4th. Dry northerly flow continued for several days thereafter.

On the 9th and 10th a shortwave deepened rapidly down the coast and cut off to bring a vigorous storm to Southern California, with rain and mountain snow. Rainfall amounted to just

over one inch in some mountain locations in San Diego County. Exceptional rainfall at Pt. Loma was recorded where 1.36 inches fell as a result of a narrow band of convection. In contrast, most of the rest of the region received less than one-half inch from that same system. Snowfall in the mountains topped out at 8-12 inches at Big Bear area ski resorts and Mt. San Jacinto. One to seven-inch amounts were common above 5,500 feet.



It's not every day that roads are closed by tumbleweeds! Strong offshore winds led to accumulating tumbleweeds in Mira Loma on 11 February. Photo Scott O'Donnell.

In its wake, offshore flow brought strong offshore winds to northern IE and eastern OC on the 11th. Top gusts registered over 70 mph for some foothill locations and parts of the valleys. This tipped several big rig trucks in northern Inland Empire freeways and downed a tree in Yucaipa.

Several days followed in dry northwest flow with troughs taking an inside track to occasionally boost winds, both onshore and offshore.

Another cut off low moved directly through the region on the 21st and 22nd with rainfall and mountain snow. This energetic storm cut off from the jet stream and took direct aim on Southern California. Mountains received from one half inch of precipitation to just over one inch at a handful of locations. Amounts varied widely in the lowlands, with some gauges reporting less than one tenth inch, while others exceeded one inch. Thunderstorms were added to the mix



Weather spotter Ted Stalder captured this amazing sunrise in La Quinta on 16 February.

in the Huntington Beach area as well as the central San Diego County coast. Snowfall above 5,500 feet ranged from 1 to 5 inches.

Fair weather followed before an inside slider trough generated very strong offshore winds on the 25th and 26th. Wind gusts exceeded 70 mph in several foothill locations, and Sill Hill near Cuyamaca Peak registered a gust of 106 mph, probably the strongest wind gust ever recorded in San Diego County. Two big rigs on I-8 tipped over and a tree fell on a house in Encinitas.

Fair and warm weather finished up the leap year month under a high-pressure ridge.

Rainfall was quite variable, with most stations falling well below average for the month, while a few approached average.

Temperatures also varied from place to place. Thermal actually fell slightly below average for the month. All other stations ranged from 1 to 4 degrees above average.

March



Green Valley Lake got snow on 1-2 March. Webcam image greenvalley-lake.com.

March was quite an active month with a non-stop series of storms throughout.

A closed low pressure system moved southward into Southern California much like many had done since November. Rainfall was very light in the lower elevations, around one tenth inch or less. Mountains harvested about two tenths up to about one inch in the orographically favored slopes. Snowfall was the bigger story, with many locations receiving 6-10 inches. A report from one ski resort was 14-18 inches. 3 inches fell as low as 4,800 feet in Crestline. Very little snow fell in other mountain ranges.

Fair weather followed for a few days before the next low pressure trough took aim at Southern California. This one was another closed low that brought several days of rain and mountain snow from the 9th to the 12th. It also tapped into a plume of subtropical moisture and brought significant precipitation in two waves, the heaviest on the 12th. Total four-day precipitation in the mountains ranged from 3 to 6.55 inches (Palomar's Birch Hill). Snowfall up to 6 inches fell in the higher mountains, but two ski resorts reported 12-14 inches. Rainfall in the lower elevations ranged from 1 to 5 inches. Even the deserts received 1 to 4 inches, enhanced by numerous thunderstorms. Flash flooding occurred in the desert, closing several roads for a time, particularly in the Anza Borrego Desert. Lightning struck a palm tree in Palm Desert. Flooding

was also reported in Riverside, Jurupa Valley and Corona. A road was undercut and damaged in Redlands. The San Diego River at Fashion Valley reached 7.32 feet, close to action stage.



Flooding in Redlands led to the undercutting of this road on 12 March. Photo from City of Redlands.

The parade of low pressure troughs diving southward down the West Coast continued. Precipitation was again measured from the 16th to the 19th. Amounts reached 1.20 inches at Lytle Creek, with a few other mountain locations topping one inch. Up to 6 inches of snow fell in the mountains, with Green Valley Lake topping the list. The snow level got down to about 4,500 feet. Cold air aloft destabilized the atmosphere on the 19th, producing thunderstorms in the Inland Empire and funnel clouds near Coronado.

A warm system from the central Pacific arrived to produce more rain and mountain snow on the 22nd and 23rd. Several mountain locations received over 2 inches of precipitation, with Running Springs leading the list at 2.82 inches. Snow remained in the high country with only an inch reported above 6,500 feet at Green Valley Lake and Big Bear Lake.





Funnel clouds appeared off the Coronado coast on 19 March (above, photo from Coronado lifeguards). Instability also led to thunderstorms producing accumulating hail across portions of San Diego, including this pile-up in Bay Park on 26 March (left, photo Jeff Edmunds).

The warm system was followed by a very cold one on the 25th and 26th. The cold air produced several thunderstorms with small, accumulating hail over parts of the San Diego Metro area. Rainfall was generally less than one half inch

across the region, except under those thunderstorms. Lightning struck a Spring Valley home. It caught on fire and injured two people. Snowfall in the mountains of 2-5 inches was recorded, with the snow level dropping briefly below 3,000 feet in Campo.

Some light showers were all that came with a weak system on the 30th, all less than one quarter inch.

Precipitation ran from about 120 to 400 percent of average for the month.

Temperatures averaged 1 to 2 degrees above normal near the coast and 1 to 3 degrees below normal inland.

April

April 2020 will be remembered for being one of the wettest Aprils in history for many locations. This came after a relatively wet March, after relatively dry months of January and February.

The first four days of April were cool with coastal clouds and breezy mountain and desert winds.



Then the storms came, deluging the region from the 6th to the 10th. This large, powerful and slow-moving storm system would bring precipitation for six days. An atmospheric river helped feed the system on the 5th and 6th,



Deep snow piled up (above), especially on 8 and 9 April in Green Valley Lake (Betty Moisant). On 10 April, Encinitas (right) got hit with the hardest coastal rain for the week (7 inches for the week) and some of the worst flash flooding and debris flows. Photo Encinitas Fire Department.

which brought heavy rain, particularly to Orange County and the northern Inland Empire, where flash floods occurred. Rain rates went as high as 0.50 to 0.80 inch per hour. The San Diego River

at Fashion Valley rose to 9.5 feet (above action stage but below flood stage of 11.3 feet).

Showers continued on Tuesday but were of low impact. Waves of showers from south to north quickly moved across the region, with persistent heavy snow in the eastern San Bernardino Mountains.

Warm frontal precipitation developed off Baja Mexico and moved into the deserts on the 8th, where 0.50 to 0.75 inch fell.

The heaviest snow fell on the 8-9th as the cold core of the system moved in.

On the 9th, the storm moved inland over southern Nevada. The warm front wrap-around moisture and stalled storm produced heavy rain across the region late that day before taking aim on San Diego County early on the 10th. 3 to 5 inches of rain fell in southern Orange County and western San Diego County. 4 inches fell in Encinitas and Valley Center in just 24 hours. Numerous flash floods and floods resulted. Flood waters combined with mud, boulders and debris in Bonsall, Oceanside, Carlsbad, Encinitas, Vista, Pacific Beach, Del Mar, Valley Center, Rancho Penasquitos and several spots in Mission Valley. Highway 78, a major freeway corridor



Flooding in Mission Valley was widespread as the San Diego River went into flood stage for nearly 17 hours on April 10-11. These photos were taken near Fashion Valley. Photos from WCM Alex Tardy.

between Oceanside and Escondido, was closed in both directions from flooding on adjacent Buena Vista Creek. Numerous swift-water rescues were made all across San Diego County.

The San Diego River at Fashion Valley rose rapidly on the 10th in response to the heaviest rainfall, and reached a peak of 12.5 feet very early on the 11th.

Six-day storm totals were 3 to 7 inches along the coast and valleys, 4 to 8 inches with locally 10 in the mountains, and 1 to 2 inches in the deserts. Snow fell above 5,500 feet, but really piled up above 6,000 feet where 1 to 3 feet were reported. The greatest six-day amount reported was 37 inches at Arrowbear. Rainfall in San Diego County was 3 to 4 inches in a 24 hour period. Hardest hit areas were northwest San Diego County where local emergencies were declared for impact and damage.

All-time daily rainfall records were broken on the 10th in Oceanside and Vista, each recording over 3 inches. Monthly rainfall records were broken for April at those locations, each receiving over six inches in just six days. A cool northwest flow pattern set up to allow the region to dry out, but not fully as occasional light showers or drizzle persisted in the week following the storms.

Winter quickly switched to summer as high pressure built strongly over the West Coast later in the month. Offshore flow started the abrupt warming trend on the 21st. The sudden summerlike temperatures lasted really through the end of the month. Temperatures touched the century mark inland, and the lower desert went over that mark. Daily high temperature records were matched or broken on each day from the 24th through the 29th, and records were set in all areas, coast to desert.

Precipitation for the month was at or near the greatest for any April in history for a few stations. Overall, one to ten times(!) the average rainfall fell in April.

Average temperature fluctuated from cooler in the first half of the month to warmer than normal during the latter half of the month. Average temperatures ranged from 0 to 1 degree above normal for inland and mountain areas, to 1 to 3 degrees above normal for the coast and the desert.

May

Fair and seasonal weather began the month under a weak trough pattern aloft.

High pressure developed over Southern California on the 5th and brought a heat wave to the region through the 9th. Temperatures soared well above normal. Palm Springs broke a daily record on the 7th with a 110-degree reading. San Diego managed 85 degrees while San Bernardino touched 100. Many daily records fell during this time.

Even the ocean was above normal; Scripps Pier recorded a record high sea surface temperature for May of 73 degrees.

On the 9th, a band of moisture and instability produced elevated convective showers in south central San Diego County. A few hundredths of an inch fell in scattered showers in the valleys.

A trough of low pressure moved into the West Coast on the 10th through the 13th, bringing heat relief and re-establishing a marine layer. On the 12th it was enough to produce

showers, largely confined to the Santa Ana Mountains and other mountains. One-third inch was the top amount recorded.

The 18th and 19th brought the most significant rainfall of the month. This came from a highly amplified trough of low pressure that moved through California. The trough took advantage of a plume of moisture directed into Southern California to produce two-day rainfall of over one-half inch in the mountains. Crestline Ridge harvested the most with 0.73 inch. Parts of Orange County received over one quarter inch, but most other lower elevations got less than one-tenth inch.

The deep trough departed on the 20th, but a weaker trough remained stationary over the West Coast through the 23rd, bringing fair but cooler weather, along with extensive marine layer cloudiness.

As the trough departed on the 24th, a cutoff low formed well off the Baja California coast, inducing a highly amplified ridge of high pressure over California and the Southwest. This brought a second heat wave to the region from the 26th through the 29th. Once again some daily high temperature records fell, particularly in the deserts where the mercury topped 110 degrees. A tenacious marine layer, common this time of year, kept the coast closer to seasonal averages.

The ridge was broken down for a slight cooling trend to finish out the month.

Precipitation was near zero for most of the region, well-below average. For some locations in Orange County, precipitation was close to average.

Temperatures averaged 2 to 5 degrees above average for the month.

June

June was a month that would have been close to average for temperatures and precipitation, except for one heat wave and two precipitation events.

The month began under a seasonal West Coast trough and a Texas ridge configuration, putting Southern California in a seasonal marine layer pattern.

The trough deepened on the 5th and 6th to produce drizzle and light showers out of the marine layer from the coast to the mountains. Amounts were generally under one-tenth inch, but some coastal slopes of the mountains registered nearly one half inch.

A very rare Santa Ana event in June developed after the trough passage on the 8th and continued through the 10th. This brought offshore winds to the foothills, where a few spots recorded gusts over 60 mph (68 mph at Sill Hill topped the list). Many other locations, even into parts of the valleys, gusted over 30 mph. Temperatures climbed into the 80s and even 90s at the coast, and over 100 in some inland coastal areas and valleys on the 9th and 10th. Lower deserts only managed the 90s, cooler than west of the mountains as expected in offshore flow.

Some ridging followed for a few days before the next trough arrived on the 13th. The trough boosted the marine layer and brought cooler weather. This general western trough pattern continued for the next week with varying strength.

A western ridge of high pressure returned on the 21st, bringing warmer weather inland where highs exceeded 90 degrees, and 100 degrees in the lower desert.

A weak trough on the 26th was followed by a much stronger trough moving through California on the 28th and 29th. This brought showers from the coast to the foothills, a rather rare event for normally the driest time of year. Rainfall was widespread with amounts up to about two-tenths of an inch, greatest near the coast in San Diego County. (This same deep trough brought light snow followed by frost to some of the mountain valleys of the Intermountain West).

The month ended on a seasonal note as the trough departed.

Precipitation amounted to double the normal June allotment for parts of the coastal areas, but well below normal to nothing inland.

Temperatures ended up mostly above normal, 0 to 2 degrees above for most areas. Exceptions were Orange County, over 3 degrees above normal. Ramona averaged very near normal and Campo finished 1 degree below normal.

July

A fairly unseasonal low pressure trough covered the West in early July, bringing cool early summer weather to the region.

High pressure over the Southwest expanded into Southern California during the 4th of July weekend, bringing a noticeable warming trend and above average temperatures for many days through the middle of the month. The 11th through the 13th were especially hot.

The high pressure relented just enough starting the 14th to return temperatures nearer to average as some semblance of a West Coast trough hovered in place through the 27th.

Hot weather returned for the last few days of the month with temperatures soaring into record territory by the 31st.



The Apple Fire (above), which started on 31 July, grew and spread during several heat waves in August. Photo Michelle Kelly.

Precipitation simply didn't happen across the region, except for some trace amounts in patchy coastal drizzle.

Average temperatures were 1 degree below normal at Campo and very near normal for coast and valleys. Lower deserts were 2 to 3.6 degrees above normal.

August

August began under a waning heat wave of late July. Strong high pressure aloft had just begun to weaken. A weak west coast trough developed and brought cooler weather through the first week.

High pressure rebuilt over the Southwest such that temperatures rose above normal after the 10th and stayed well above normal for nearly the entire rest of the month. Sea surface temperatures that were quite low at the beginning of the month rose sharply and contributed to a muggy heat that lasted for most of two weeks.

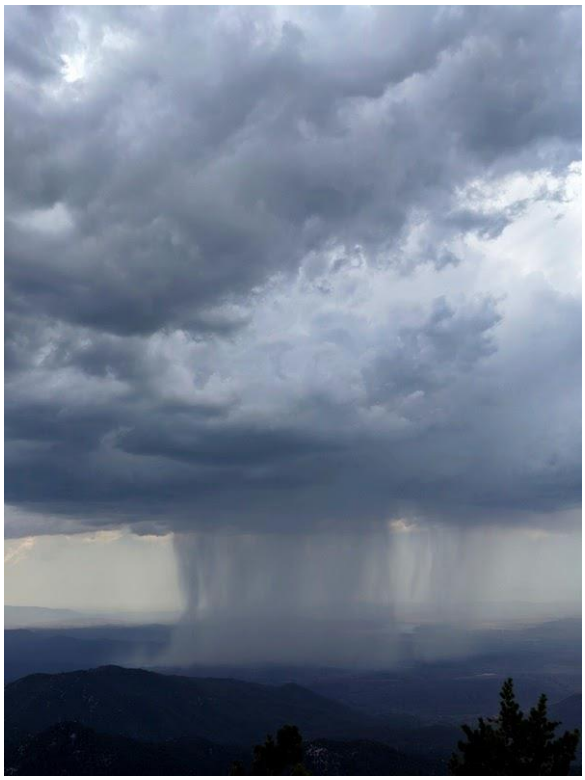
The heat peaked around the middle of the month with daily high temperature records broken for several consecutive days.

After virtually no monsoon thunderstorms for the season for July through the middle of August, the thunderstorms finally got started on the 15th and lasted through the 22nd. Several days featured isolated to scattered thunderstorms, mainly in the mountains and high desert. The most widespread and heaviest thunderstorms occurred on the 18th. On this day some inland valleys near the mountains got hit as well. Several flash flood warnings, severe thunderstorm warnings and flood advisories were issued during that week, especially on the 18th.

The atmosphere dried out after the 24th, but the heat kept coming. It wasn't until the last three days of the month that temperatures fell down to or just below normal.

Precipitation was zero for most areas this month. The heavy thunderstorms were quite isolated in the mountains and high desert, missing most climate stations.

Average temperature ranged from 2 to 6.6 degrees above average for the month. Thermal and Palm Springs experienced their hottest Augusts on record.



A heavy thunderstorm on the eastern outskirts of Hemet (above) proved to be one of the heaviest on 18 August, the day with the most monsoon thunderstorms of the season. Photo Florian Boyd.

September

September began with seasonal temperatures and a marine layer presence near the coast.

High pressure aloft built along the West Coast on the 4th and eventually expanded and strengthened over the entire West on the 5th and 6th. This led to a major heat wave that in some ways and for some areas was unprecedented. On the 6th, temperatures of 121 degrees were

recorded in Woodland Hills (the highest temperature on record in Los Angeles County) and in Chino. These two records represent the highest readings on record in Southern California's coastal basin. Climate stations in El Cajon, Alpine and Escondido achieved their all-time highest temperatures on record for any day on the 6th. Idyllwild achieved that feat on 5th, but that record lasted all of one day as it was eclipsed on the 6th.

During that epic heat wave, the Bobcat, El Dorado and Valley fires started in Southern California. They would grow into major fires during the heat wave.



The El Dorado Fire near Yucaipa (above, photo sbsun.com) and the Valley Fire southeast of Alpine (below, image SDG&E/HPWREN) both sprang to life on the very hot weekend of 5-6 September.

Temperatures would moderate some starting on the 7th as an unseasonably cold trough dropped south from Canada through the Rockies. The produced a very early snow across that region, but also produced offshore flow into Southern California. That was a major concern for Southern California residents as existing fires were just getting going. Luckily, the offshore winds were not very strong, widespread or long-lasting on the 8th and 9th, and residents could rest easier having dodged a bullet as the offshore flow weakened by the 10th.



High pressure aloft rebuilt, providing warmer than average weather for a few days.

The next heat wave got going on the 15th with temperatures back over 100 degrees for many inland valleys. The heat eased and the marine layer returned from the 18th to the 20th. Several days followed with slight variations in the marine layer and temperatures averaging just above normal.

The final days of September were hot ones as yet another strong high pressure ridge gripped the West starting on the 27th. Light offshore flow helped boost temperatures even close to the coast.

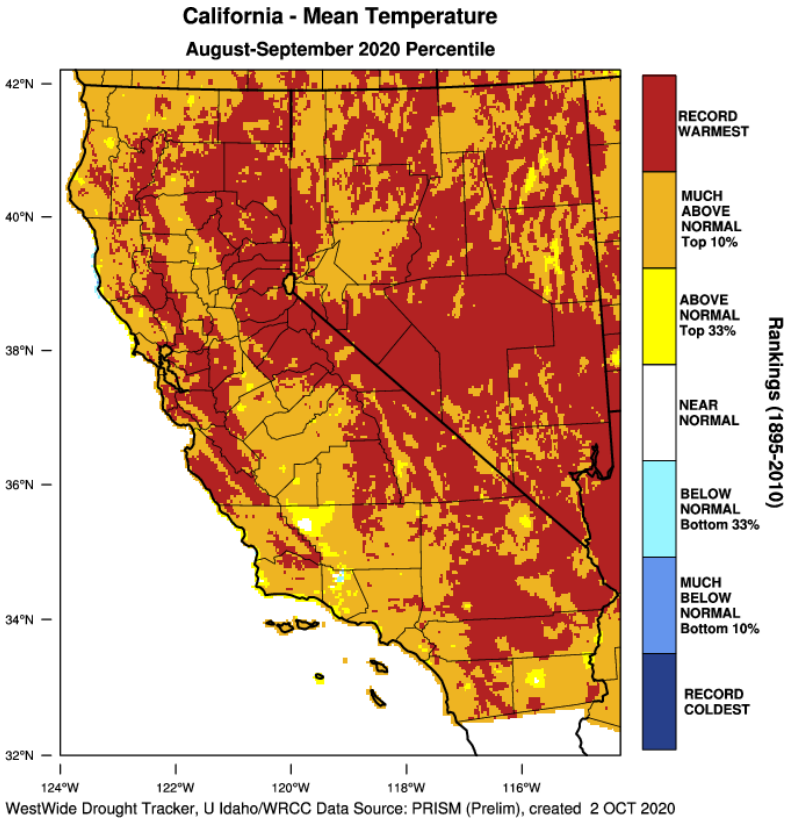
Monthly precipitation was zero for all areas as monsoon flow and remnant tropical cyclone moisture was largely absent all month.

Average temperatures across the region ranged from 3 to 5.7 degrees above average for the month. It was the warmest September on record for Palm Springs, Indio, Palomar Mountain, Idyllwild and Escondido.

Late Summer Heat (excerpts by Alex Tardy, Warning Coordination Meteorologist)

The 2020 season had many heat waves and the hottest August to September period on record for much of the valleys, mountains and deserts (see chart, right). On September 5th, the highest temperature on record of 115 degrees was reached in Escondido. A reading of 113 degrees in Alpine set the all-time record that day. Escondido experienced their hottest July to September period on record.

During the Labor Day weekend, San Diego County received triple the heat-related emergency calls and hospitalizations over the average heat wave.



October

The strong and immovable high pressure ridge over the West during August and September continued to bring dry and hot weather to Southern California the first week or so of October.

A weak low pressure trough over the Pacific Ocean promised rain roughly from the 9th to the 11th, but it came and went with no rain, only cooler, cloudier weather.

A West Coast ridge redeveloped and continued through the middle of the month, bringing more hot weather, particularly from the 12th to the 16th. The heat was helped by weak Santa Ana conditions.

Autumn began to assert itself as deeper troughs of low pressure began to rotate through the northern part of the country. That brought more persistently cooler weather to Southern California for the last two weeks of the month. Temperatures fell below average for the first time in a long time from the 21st to the 27th.

A vigorous trough of low pressure barreled down the coast on the 25th and 26th. This was energetic enough to wring out some rain showers, amounting mostly to less than one tenth inch in the lowlands, but 0.25-0.75 inch at some mountain stations.

While the showers were ending near San Diego early on the 26th, strong offshore winds, a “cool” Santa Ana, had already begun farther north with gusts over 50 mph observed in the northern Inland Empire. For most of the 26th, this wind event would prove quite strong, with

gusts at several locations exceeding 70 mph (top gust 88 mph at Fremont Canyon). The winds toppled big rig trucks and downed mature trees in the northern Inland Empire. The dry winds also contributed to spreading two fire starts, the Blue Ridge and Silverado fires in eastern Orange County.

High pressure rebuilt along the West Coast once again to allow for a dry warming trend to finish out the month.



Large, mature trees were felled by the strong Santa Ana winds on 26 October, like these in Riverside. Photo Dan Coats.

Total monthly precipitation ranged from zero in the desert, a trace to 0.17 inch along parts of the coast and valleys, and about 0.25 to 0.77 inch for the mountains. Those wetter areas ended up around 150% of normal for the month, while most areas fell below 25%.

Average temperatures across the region ranged from 4 to 7 degrees Fahrenheit above average for the month, good for one of the warmest Octobers on record for some locations.

November

November was a roller coaster ride for much of the month. It began on the warm side under high pressure, producing the kind of heat that set new daily record high maximum and minimum temperatures for inland areas on the 3rd through the 5th.

A deep and cold low-pressure trough from the Gulf of Alaska dove down the West Coast into Southern California, bringing the first significant precipitation of the season to the region from the 7th through the 9th. San Diego County harvested the most precipitation overall. Lake



The first significant snow of the season dropped over one foot across the higher San Bernardino Mountains on November 7-9 (Hwy 18 photo Alex Tardy).

Cuyamaca nearly reached four inches, and other mountain locations ranged from two to 3.5 inches. Snowfall of one foot was common in the San Bernardino Mountains. Some higher ski slopes received around 18 inches. Two to eight inches were common below 6,000 feet elevation, and snow was observed as low as 4,000 feet. Rainfall across the lower elevations ranged from less than one-quarter inch for some spots in the northern Inland Empire and Orange County, while most received from one-third to two inches. Several thunderstorms erupted in the Inland Empire, packing strong damaging winds. One of these felled a few large trees and snapped large branches in Redlands. While briefly heavy rains struck the Apple and El Dorado burn scars, any flooding and debris flows were minimal.

Some record low minimum and maximum temperatures were set on the 9th and 10th, during and following the storm.

A weak troughing pattern across the West continued for several days, keeping the weather rather cool.

High pressure amplified on the 15th and combined with warm Santa Ana flow to produce record heat again west of the mountains on the 16th.

Seasonal weather followed as a trough of low pressure producing onshore flow passed by to the north on the 17th through the 19th, followed by higher pressure and offshore flow to warm and dry the region on the 20th through the 22nd. Coastal fog was a frequent visitor this week.

Dry, inside slider type troughs moved through California from the 23rd through the 27th, during the Thanksgiving holiday period. This brought fair but cool weather, and a strong offshore wind event from Thanksgiving into the next day. Top wind gusts in the inland valleys and foothills were 50-70 mph, with Fremont Canyon topping the list with a 79-mph gust. High pressure rebuilt quickly, allowing the month to end with a warming trend from the 28th through the 30th.

Total monthly precipitation ranged from near zero in the deserts, up to two to four inches in the valleys and mountains. That was good for single-digit percent of normal monthly rainfall for the deserts, while those wetter mountain areas ended up just over 100% of normal. The populated lowlands finished anywhere from 10 to 100% of normal monthly precipitation. But after a dry October, water year totals were all at a deficit.

Average monthly temperatures across the region ranged from roughly 0.5 degree Fahrenheit above average in San Diego, to 3.6 degrees above average in Palm Springs. Most stations reported 1.0 to 2.5 degrees above average.

December

High pressure and offshore flow got December started in a dry and warm way. Strong Santa Ana winds developed on the 2nd and 3rd, producing a fire hazard. Several wildfires broke out, including the Bond Fire in Silverado Canyon, which eventually burned 7,300 acres. The Airport Fire (Corona), the Willow and Cerritos Fires also erupted, but were contained quickly. This was a big wind storm. Isolated wind gusts in the foothills gusted to over 90 mph, while widespread winds in populated valleys gusted 30 to 50 mph.

The pattern of low pressure troughs dropping south over the Southwest produced strong offshore winds again on December 7-8 and many lighter offshore wind episodes through Christmas Eve.



Heavy rains led to serious flooding in this Garden Grove neighborhood on 29 December. Photo Brett Trimper.

Precipitation finally arrived early on the 28th. Heavy rain moved through the region early on the morning of December 28, and was followed by showers and isolated thunderstorms through the rest of the day. Showers lingered into the early morning of the 29th. Precipitation amounts ranged from about one-third inch around parts of San Diego, to just over 2.5 inches in Garden Grove and some mountain areas. Snowfall accumulated as much as 10 to 20 inches in the mountains, and fell as low as 3,000 feet elevation. 8-18 inches fell in the San Jacinto Mountains. Local flooding inundated a neighborhood in Garden Grove with a reported rain rate of one inch in 45 minutes. Only minor mud flows were observed on burn scars. Tree damage was incurred in Crestline due to heavy snow. A thunderstorm produced damage to trees and a building in El Cajon and a tree in National City.



Heavy snow piled up on 28 December with 8-18 inches reported in the San Jacinto Mountains. Photo by John Hubbs.

December finished on a fair note with offshore flow and some winds to ring in the new year.

Total monthly precipitation came from essentially one storm, which amounted to 25 to 70 percent of the monthly average across the region.

Average monthly temperatures across the region ranged from roughly 1.5 to 3.5 degrees Fahrenheit above average. Fullerton managed 3.8 degrees above average, while Ramona was 1.2 degrees above average.